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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,076	11/13/2003	Udo Custodis	02P19108	7295

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EXAMINER

QUARTERMAN, KEVIN J

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/706,076

Applicant(s)

CUSTODIS ET AL.

Examiner

Kevin Quarterman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9 and 13-17 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-7,9 and 13-17 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 06 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment and remarks received 06 January 2006 have been entered and overcome the objections to the title, claims, and drawings.

Drawings

2. The replacement-drawings were received on 06 January 2006. These drawings are acceptable.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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5. Claims 1-7, 9, and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vollkommer (US 6,034,470) in view of Zachau (US 6,045,721).

6. Regarding independent claim 1, Figure 3a of Vollkommer shows a dielectric barrier discharge lamp having a discharge vessel (2), the wall of which enclose a discharge medium; a set of electrodes (3-6) for generating dielectric barrier discharges in the discharge medium, with a dielectric barrier action in respect of at least some of the set of electrodes, a phosphor mixture, which is applied to part of the wall of the discharge vessel, the phosphor mixture comprising the following phosphor components: R: (Y, Gd) BO₃ : Eu; G: LaPO₄ (Tb) or LaPO₄ : (Ce, Tb); B : BaMgAl₁₀O₁₇ : Eu (col. 10, ln. 65-67; col. 11, ln. 1).

7. Vollkommer teaches the claimed limitations discussed earlier but fails to exemplify the phosphor components satisfying the following proportions by weight: $0.05 \leq R \leq 0.08$; $0.50 \leq G \leq 0.70$; $0.20 \leq B \leq 0.40$ and $R+G+B=1$.

8. Zachau teaches that it is known in the art to provide discharge lamps with a phosphor mixture of the following components:

R: (Y, Gd) BO₃ : Eu; G: LaPO₄ (Tb) or LaPO₄ : (Ce, Tb); B: BaMgAl₁₀O₁₇ : Eu, the phosphor components satisfying the following proportions by weight: $0.10 \leq R \leq 0.50$; $0.30 \leq G \leq 0.70$; $0.05 \leq B \leq 0.40$ and $R+G+B=1$ (col. 4, ln. 20-36). The Examiner notes that the 10% of the red component recited by Zachau is close enough to the 8% cited in independent claim 1 that one skilled in the art would have expected them to have the same properties. Zachau discloses that this phosphor mixture is provided for improving

efficiency, stability, and maintenance of barium magnesium aluminate phosphors (col. 1, ln. 34-37).

9. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the discharge lamp of Vollkommer with the phosphor mixture taught by Zachau for widening the range possible applications for the discharge lamp.

10. Regarding claim 2, Zachau discloses the phosphor components satisfying the following proportions by weight: $0.10 \leq R \leq 0.50$; $0.58 \leq G \leq 0.66$; $0.25 \leq B \leq 0.35$ and $R+G+B=1$ (col. 4, ln. 20-36). The Examiner notes that the 10% of the red component recited by Zachau is close enough to the 8% cited in the claim that one skilled in the art would have expected them to have the same properties.

11. Regarding claim 3, Vollkommer discloses the discharge vessel containing xenon as discharge medium (col. 9, ln. 14-16).

12. Regarding claim 4, Vollkommer discloses the xenon filling pressure being in the range between 50 and 200mbar (col. 9, ln. 16-17).

13. Regarding claim 5, Vollkommer discloses the xenon filling pressure being in the range between 100 and 150mbar (col. 9, ln. 16-17).

14. Regarding claim 6, Figure 3a of Vollkommer shows the discharge vessel being flat and comprising a back plate (7) and a front plate (8) for the light to emerge, which is at least partly transparent to light (claim 1).

15. Regarding claim 7, Vollkommer discloses the discharge vessel being tubular (col. 12, ln. 1-8).

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16. Regarding claim 9, Figure 3a shows the set of electrodes comprising two or more elongate electrodes arranged on the wall of the discharge vessel.

17. Regarding claim 13, Zachau discloses the following applies to the proportions by weight in the mixture: $R=0.10$, $G=0.60$ and $B=0.30$. The Examiner notes that the 10% of the red component recited by Zachau is close enough to the 8% cited in the claim that one skilled in the art would have expected them to have the same properties.

18. Regarding claim 14, the Examiner notes that something old does not become patentable upon the discovery of a new property (MPEP § 2112). Thus, since Zachau teaches all of the structural limitations, the lamp of Zachau inherently exhibits a color temperature of 10,000K or more.

19. Regarding claim 15, the Examiner notes that something old does not become patentable upon the discovery of a new property (MPEP § 2112). Thus, since Zachau teaches all of the structural limitations, the lamp of Zachau inherently exhibits a color temperature of 20,000K or more.

20. Regarding claim 16, the Examiner notes that something old does not become patentable upon the discovery of a new property (MPEP § 2112). Thus, since Zachau teaches all of the structural limitations, the lamp of Zachau inherently exhibits a color temperature of 30,000K or more.

21. Regarding claim 17, the Examiner notes that something old does not become patentable upon the discovery of a new property (MPEP § 2112). Thus, since Zachau teaches all of the structural limitations, the lamp of Zachau inherently exhibits a color temperature of 40,000K or more.

Response to Arguments

22. Applicant's arguments received 06 January 2006 have been fully considered but they are not persuasive.

23. In response to applicant's argument that Zachau does not teach or suggest the claimed lower range for the red component, the Examiner notes that Zachau discloses the lower limit of the red component being 10%, which is above the 8% recited in amended independent claim 1. Applicant's disclosure in the instant application recites the red component (R) being $0.05 \leq R \leq 0.15$, preferably $0.06 \leq R \leq 0.12$. Applicant has now amended the claim to overcome Zachau by reducing the upper limit of the red component to be 8%. The Examiner submits that a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties (MPEP § 2144.05).

Conclusion

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

25. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Quarterman
Examiner
Art Unit 2879

kq 
20 January 2006


Joseph Williams
Primary Examiner
Art Unit 2879